Oceanic vs. Oceanic Convergent Boundaries

What happens: two oceanic plates collide (converge). One slides below the other and into the Earth's mantle (this is subduction)

Why does this happen? The older plate is more dense, so it can sink below and melt

What physical feature(s) are formed? Deep ocean trench and island chain called an "island arc"

Example: Japan, and the Aleutian Islands in Alaska

Oceanic vs. Continental Convergent Boundaries

What happens: An oceanic and a continental plate collide (converge). The denser and thinner oceanic plate is forced down into the Earth's mantle (by the process of subduction)

Why does this happen? The oceanic plate is denser, so it will sink below and melt.

What physical feature(s) are formed? Deep ocean trench and island volcanic inland mountain chains

Example: Juan de Fuca oceanic plate colliding with the North American Plate created the Cascade Mountain Range in the western U.S.

The Andes Mountains are another example.

Continental vs. Continental Convergent Boundaries

What happens: Two thick continental plates collide. The plates do not subduct. They crumple, fold, fault, and create mountain chains.

Why does this happen? Both plates are less dense than the mantle. They are "buoyant" and won't sink. *NOTE: a small amount of the heavier lithosphere below the continental crust may break free and subduct.*

What physical feature(s) are formed? Mountain chains

Example: Himalayas were formed when the Indo-Australian Plate collided with the Eurasian Plate.

Transform Fault Boundaries:

What happens: two plates slide horizontally past one another

Why does this happen? Most, not all are found on ocean floor. Plates are pushed by ocean floor spreading.

What physical feature(s) are formed? Basically, a deep crack called a "transform fault boundary"

Example: San Andreas Fault in California